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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,806

01/21/2005

William B. O'Neal

3165-114

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06/06/2008

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EXAMINER

HOLT, ANDRIAE M

ART UNIT

PAPER NUMBER

1616

NOTIFICATION DATE

DELIVERY MODE

06/06/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

DETAILED ACTION

This Office Action is in response to the amendments filed on March 20, 2008.

Claims 1 and 8-30 are pending in the application. Claims 1, 8, 12-24, and 29 have been amended. Claims 2-7 have been canceled.

The rejection of claims 1-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No. 6,534,444 has been overcome due to amendment of the claims. The rejection **is withdrawn**.

The provisional rejection of claims 1-30 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of copending Application No. 10/522,097, claims 1-33 of copending Application No. 10/519,978, and claims 1-32 of copending Application No. 10/522,157 **is maintained**.

The examiner duly notes in response dated March 20, 2008, applicant's request that the rejection be held in abeyance until the conflicting claims are patented.

Double Patenting

Claims 1-30 of this application conflict with claims 1-35 of Application No. 10/522,097, claims 1-33 of Application No. 10/519,978, and claims 1-32 of Application No. 10/522,157. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their

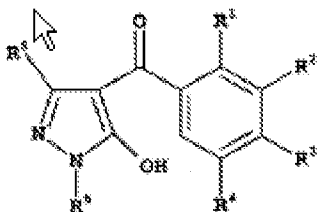
retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-30 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of copending Application No. 10/522097. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to synergistic herbicidal compositions with the same main component, component A, a 3-heterocyclyl-substituted benzoyl derivative of the formula I



I

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° in which the variables have the following meanings:

R^1 , R^3 are halogen, C_1 - C_6 -alkyl, C_1 - C_6 -haloalkyl, C_1 - C_6 -alkoxy, C_1 - C_6 -haloalkoxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfinyl or C_1 - C_6 -alkylsulfonyl;

R^2 is a heterocyclic radical selected from the group: isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, 4,5-dihydroisoxazol-3-yl, 4,5-dihydroisoxazol-4-yl and 4,5-dihydroisoxazol-5-yl, it being possible for the six radicals mentioned to be unsubstituted or mono- or polysubstituted by halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -alkylthio;

R^4 is hydrogen, halogen or C_1 - C_6 -alkyl;

R^5 is C_1 - C_6 -alkyl;

R^6 is hydrogen or C_1 - C_6 -alkyl;

or one of its environmentally compatible salts;

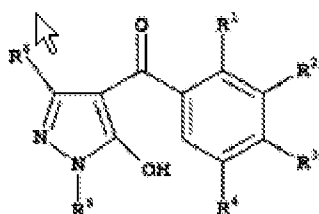
, a component B and at least one

herbicidal compound from the group of acetolactate synthase inhibitors, lipid biosynthesis inhibitors, and photosynthesis inhibitors. Applicant is using open terminology (the term comprising) which allows any substance or herbicidal component to be added to the composition. Without any unexpected results on record imparting the addition of component B, the inventions are not patentably distinct.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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Claims 1-30 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-33 of copending Application No. 10/519,978. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to synergistic herbicidal compositions with the same main component, component A, a 3-heterocyclyl-substituted benzoyl derivative of the formula I



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R^2 is a heterocyclic radical selected from the group: isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, 4,5-dihydroisoxazol-3-yl, 4,5-dihydroisoxazol-4-yl and 4,5-dihydroisoxazol-5-yl, it being possible for the six radicals mentioned to be unsubstituted or mono- or polysubstituted by halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -alkylthio;

R^4 is hydrogen, halogen or C_1 - C_6 -alkyl;

R^5 is C_1 - C_8 -alkyl;

R^6 is hydrogen or C_1 - C_8 -alkyl;

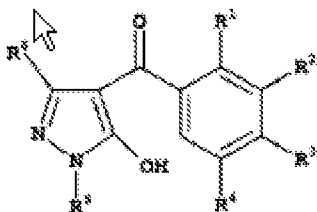
or one of its environmentally compatible salts;

, a component B and at least one

herbicidal compound from the group of acetolactate synthase inhibitors, lipid biosynthesis inhibitors, and photosynthesis inhibitors. Applicant is using open terminology (the term comprising) which allows any substance or herbicidal component to be added to the composition. Without any unexpected results on record imparting the addition of component B, the inventions are not patentably distinct.

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Claims 1-30 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of copending Application No. 10/522,157. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to synergistic herbicidal compositions with the same main component, component A, a 3-heterocycl-yl-substituted benzoyl derivative of the formula I



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R^1 , R^3 are halogen, C_1 - C_6 -alkyl, C_1 - C_6 -haloalkyl, C_1 - C_6 -alkoxy, C_1 - C_6 -haloalkoxy, C_1 - C_6 -alkylthio, C_1 - C_6 -alkylsulfinyl or C_1 - C_6 -alkylsulfonyl;

R^2 is a heterocyclic radical selected from the group: isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, 4,5-dihydroisoxazol-3-yl, 4,5-dihydroisoxazol-4-yl and 4,5-dihydroisoxazol-5-yl, it being possible for the six radicals mentioned to be unsubstituted or mono- or polysubstituted by halogen, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy or C_1 - C_4 -alkylthio;

R^4 is hydrogen, halogen or C_1 - C_6 -alkyl;

R^5 is C_1 - C_6 -alkyl;

R^6 is hydrogen or C_1 - C_6 -alkyl;

or one of its environmentally compatible salts;

, a component B and at least one

herbicidal compound from the group of acetolactate synthase inhibitors, lipid biosynthesis inhibitors, and photosynthesis inhibitors. Applicant is using open terminology (the term comprising) which allows any substance or herbicidal component to be added to the composition. Without any unexpected results on record imparting the addition of component B, the inventions are not patentably distinct.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The rejection of claims 1-33 under 35 U.S.C. 103(a) as being unpatentable over Sievernich et al. (CA 2,334,955) **is maintained**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sievernich et al. (CA 2,334,955).

Applicant's Invention

Applicant claims a herbicidal mixture comprising component A, a 3-heterocyclyl-substituted benzoyl derivative, component B, a synergistically effective amount of the compound of formula II (nicosulfuron), and component C, at least one herbicidal compound selected from the group consisting of at least one of acetolactate synthase

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inhibitors, lipid biosynthesis inhibitors, and photosynthesis inhibitors. Applicant claims a process for preparation of the herbicidal composition and a method of controlling undesired vegetation.

Determination of the scope of the content of the prior art

(MPEP 2141.01)

Sievernich et al. teach a synergistic herbicidal mixture comprising at least one 3-heteroxyxyl-substituted benzoyl derivative or its environmentally compatible salts and a synergistically effective amount of at least one herbicidal compound from the group of acetolactate synthase inhibitors, lipid biosynthesis inhibitors, and photosynthesis inhibitors and other herbicides (page 1, lines 4-40-1a, lines 1-6) (claims 1 and 29, component A and component C, instant invention). Sievernich et al. teach that the most particularly preferred 3-heterocyclyl-substituted benzoyl derivatives include 4-[2-chloro-3-(3-methyl-isoxazol-5-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole (page 19, lines 24-26) and 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole (page 20, lines 19-21) (claims 1-9 and 11-30, instant invention). Sievernich et al. teach that suitable components B are imidazolinones, pyrimidyl ethers, sulfonamides, sulfonyl ureas, anilides, chloroacetanilides, thioureas, and benfuresate or perfluidone, propanil, pyridate, benzothiadiazinones, dinitrophenols, dipyridylenes, ureas, phenols, cloridazon, triazines, triazinones, uracils, or biscarbamates (page 2, lines 44-47-page 3, lines 1-20)(claims 8-9, specific classes of component C, instant invention).

Sievernich et al. further teach herbicides, which can be used in combination with the 3-heterocyclyl-substituted benzoyl derivatives, include acetolactate synthase inhibitors which include nicosulfuron and rimsulfuron (page 4, lines 3-26). Sievernich et al. teach lipid biosynthesis inhibitors that can be used in combination include dimethenamid and S-dimethenamid (page 5, lines 1-20). Sievernich et al. further teach photosynthesis inhibitors that can be used in combination included pyridate, bentazone and atrazine (page 5, line 46-page 6, lines 1-22) (claims 10-24 specific compounds for component B and C, nicosulfuron, rimsulfuron, dimethenamid, S-dimethenamid, atrazine, and bentazone, instant invention).

Sievernich et al. teach that as a rule, the mixture comprise components A) and B) in such weight ratios that the synergistic effect takes place. The ratios of component A) and B) in the mixture preferably range from 1:0.002 to 1:800 (page 38, lines 20-24) (claim 25-26, ratio, instant invention). Sievernich et al. further teach that the herbicidal compositions have an herbicidally active amount of a synergistic herbicidal mixture and at least one liquid and/or solid carrier and if desired, at least one surfactant (page 2, lines 8-11) (claim 27-28, solid and/or liquid carrier and surfactant, instant invention). Sievernich et al. teach the invention relates to processes for the preparation of the compositions and to a method of controlling undesirable vegetation (page 2, lines 13-15) (claims 29, process of preparation and method of controlling undesired vegetation, instant invention). Sievernich et al. teach that the active ingredients of components A) and B) can be formulated jointly, but also separately, and/or applied to the plants, their environment and/or seeds jointly or separately (page 37, lines 31-33)(claims 29-30,

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applied to vegetation and/or seeds, instant invention). Sievernich et al. teach it is preferable to apply the active ingredients simultaneously, but it is possible to apply them separately (page 37, lines 33-35) (claims 29, applied simultaneously or in succession, instant invention). Sievernich et al. further teach the mixtures can be applied pre-or post-emergence and that in the case of post-emergence treatment of the plants (page 38, lines 1-2), the herbicidal compositions according to the invention are preferably applied by foliar application (page 38, lines 11-13)(claims 29-30, mixture and, applied to leaves, instant invention).

Sievernich et al. teach in table 21, page 61 the herbicidal action of compound Ia.33 and nicosulfuron on *Ipomoea lacunose*. Sievernich et al. further teach in tables 41-43, page 67 the herbicidal action of compound Ia.33 and dimethenamid on *Panicum miliaceum*, *Sorghum halepense*, and *Veronica ssp.*, respectively, in the field. Sievernich et al. teach the herbicidal action of compound Ia.33 and atrazine in table 68, page 73, on *Sorghum bicolor* in the field. Sievernich et al. further teach in table 76, page 75 the herbicidal action of compound Ia.3, nicosulfuron and dicamba on *Ipomoea acuminata* in the field (post-emergence treatment).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Sievernich et al. do not teach the specific three-way combinations of component A, component B and component C.

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of invention to use the teachings of Sievernich et al. to produce an effective herbicidal composition. Sievernich et al. teach it is within the skill of the art to make the herbicidal combinations of 3-heterocyclyl-substituted benzoyl derivative and various herbicides that are active against broad leaf weeds and grasses provide a synergistic effective in eradicating the undesirable plants. Sievernich et al. does not specifically teach the three-way combinations according to independent claims 1 and 29, however, it does teach the combination of component A and nicosulfuron and the three-way combination of component A with nicosulfuron and dicamba, providing synergistic damage to the undesired vegetation. Thus, in view of *In re Kerkhoven*, 205 USPQ 1069 (C.C.P.A. 1980), it is *prima facie* obvious to combine two or more compositions each of which is taught by prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in prior art, thus claims that requires no more than mixing together two or three conventional herbicides set forth *prima facie* obvious subject matter. Therefore, one skilled in the art at the time of invention would have been motivated to combine herbicides to increase the efficacy of a herbicide such that the maximum level of control or growth regulation for a given application rate of a herbicide is increased, or alternatively, the application rate of a herbicide giving optimum control or growth regulation can be reduced.

Response to Arguments

Applicant's arguments filed March 20, 2008 have been fully considered but they are not persuasive. Applicant argues that Sievernich et al. do not disclose or suggest ternary synergistic herbicidal mixtures comprising 4-[2-methyl-3-(4, 5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole, nicosulfuron, and a third herbicidal compound.

In response to applicant's arguments, Sievernich et al. do teach and suggest ternary synergistic herbicidal mixtures comprising 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole, nicosulfuron, and a third herbicidal compound. Sievernich et al. teach that 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole can be combined with any number of the herbicides in binary or ternary composition. Sievernich et al. teach that the examples provided demonstrate the action of the herbicidal compositions which can be used according to the invention, without excluding the possibility of other uses, see page 54, lines 34-36. Thus, the skilled artisan would have been motivated to combine 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole, nicosulfuron, and a third herbicidal compound as Sievernich et al. suggest this can be done and the examples are not limiting. In view of *In re Kerkhoven*, 205 USPQ 1069 (C.C.P.A. 1980), it is *prima facie* obvious to combine two or more compositions each of which is taught by prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in prior art, thus claims

that requires no more than mixing together two or three conventional herbicides set forth prima facie obvious subject matter.

Applicant also argues that Sievernich et al. teaches away from the ternary mixtures according to the present invention. In response to applicant's arguments, Sievernich et al. uses open terminology, "comprising" and "at least one herbicide" which do not limit the number of herbicides that can be used in the combination. Thus, one skilled in the art would have been motivated as taught by Sievernich et al. to use the ternary combination of 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole, nicosulfuron, and a third herbicidal to formulate a synergistic herbicidal composition.

The examiner recognizes the synergistic activities of 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole, nicosulfuron, and atrazine, as shown by the examples. However, applicant's claims to a synergistic herbicidal composition comprising 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole, nicosulfuron, and any herbicide in groups C1 to C3, acetolactate synthase inhibitors, lipid biosynthesis inhibitors or photosynthesis inhibitors is not commensurate in scope. As applicant's argument points out on page 19, due to the complex interactions of different active ingredients, there is no reason for one skilled in the art, having a wide selection of synergistically effective binary and ternary mixtures at his disposal, to take the risk with random mixtures from the generic disclosure. Atrazine is a species on one genus, lipid biosynthesis inhibitors. A single species cannot show purported unexpectedness of an

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entire genus, let alone two other classes of herbicides. Therefore, the examiner cannot determine based on a single species that has been tested, if the entire genus would produce the purported synergism when combined with 4-[2-methyl-3-(4, 5-dihydroisoxazol-3-yl)-4-methylsulfonylbenzoyl]-1-methyl-5-hydroxy-1H-pyrazole and nicosulfuron.

None of the claims are allowed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andriae M. Holt whose telephone number is 571-272-9328. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Andriae M. Holt
Patent Examiner
Art Unit 1616

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616